

DOCUMENT RESUME

ED 189 372

CE 025 862

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 TITLE The Agricultural Educator--A Change Agent.
 PUB DATE 5 May 80
 NOTE 20p.: Paper presented at the Seminar in Agricultural Education (Columbus, OH, May 5, 1980).

EDRS PRICE MF01/PC01 Plus Postage.
 DESCRIPTORS *Agricultural Education; Behavior Change; *Change; *Change Agents; *Change Strategies; Educational Strategies; Innovation; Vocational Education; Vocational Education Teachers

ABSTRACT

An analysis of the different models or discussions of the process of change would indicate the following common elements: (1) an awareness of a need for change or a possible innovation for adoption or the identification of a problem which needs to be corrected; (2) a development or cultivation of interest in the change or innovation; (3) the identification of alternate approaches or possibilities for change and/or the evaluation and selection of the best alternative; (4) a trial period or an establishment of the best identified solution; (5) the adoption process which includes stabilization and the necessary support systems to make the change feasible. This process then becomes the conceptual framework from which a person decides to promote or cultivate change, and to work as a change agent. The effective change agent can draw on a knowledge of the change process and incorporate into a plan of action information obtained from studies of communication patterns and the adoption process. The challenge for the change agent requires the development of expertise to determine the support, the information, and the persons to work with at a given time in the process to maximize the effectiveness and stabilize the impact of the change. (LRA)

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ED189372

THE AGRICULTURAL EDUCATOR--

A CHANGE AGENT

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Presented to

The Seminar in Agricultural Education

Sponsored by

The Graduate School and the
Department of Agricultural Education
The Ohio State University

May 5, 1980

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THE AGRICULTURAL EDUCATOR--A CHANGE AGENT

Introduction

The topic of change has received a great deal of attention in recent years as a dynamic force in our modern society, prompting scholars in many fields to examine change, the change process, and the role of the change agent. Individuals, small groups, large groups, schools, organizations, communities, countries, cultures, industries, businesses, and numerous other social classifications have been studied in relation to change. In view of the charge given to education by our society and the relationship of the individual and the group in carrying out this charge, this paper proposes to examine studies and hypotheses concerning change in the educational setting and the role of the change agent in agricultural education.

The features of contemporary change have been summarized in a set of generalizations by Moore (1963:2):

1. For any given society or culture rapid change occurs frequently or "constantly."
2. Changes are neither temporally nor spatially isolated--that is changes occur in sequential chains rather than as "temporary" crises followed by quiet periods of reconstruction, and the consequences tend to reverberate through entire regions or virtually the entire world.
3. Thus, since contemporary change is probable "everywhere" and its consequences may be significant "everywhere," it has a dual basis.
4. The proposition of contemporary change that is either planned or issues from the secondary consequences of deliberate innovations is much higher than in former times.
5. Accordingly, the range of material technology and social strategies is expanding rapidly and its net effect is additive or cumulative despite the relatively rapid obsolescence of some procedures.

6. The normal occurrence of change effects a wider range of individual experience and functional aspects of societies in the modern world--not because such societies are in all respects more "integrated" but because virtually no feature of life is exempt from the expectation or normality of change.

The fact that change is occurring cannot be denied, nor can the consequences of the change always be predicted. However, to the extent that we propose to influence the direction of our institutions and programs, we must attempt to direct change by careful planning and honest appraisals of projected outcomes. The fact that change is more prevalent and innovations more rapid than ever before increases the necessity for careful analysis of events and techniques for altering the course of individuals and institutions, including those in the educational setting. This factor suggests that professionals working in agricultural education can profit from examining the principles and procedures related to the change process and the role of the change agent. The challenge then becomes the internalization and utilization of this information.

Lionberger and Wiles focused on change in the educational setting. Lionberger has long been associated with studies of change through the agricultural extension service activities conducted at the University of Missouri. He then prepared a paper for the Association of Supervision and Curriculum Development drawing on the basis of this research. In the paper, he listed eight contributions or characteristics of change identified from the research (Lionberger, 1965:31). They included:

1. Use of process and stage concepts as a means of explaining the adoption of innovations by individuals.
2. Definition of the function of information sources in the individual adoption process.
3. Conceptualization of functions performed by individuals in the individual and community adoption processes.
4. Examination of the correlates of change acceptance by farmers with attempts to predict farm practice adoption rates.

5. Definition of adoption sequences and patterns and thus the community adoption process.
6. Study of structural features in the communicative behavior of individuals about innovations.
7. "Role of change agent" studies which open the way for assessing the influence of "outside" social systems on the adoption of practices by individuals.
8. Definition of characteristics of innovations which have a bearing on acceptance rates.

Lionberger stressed that the process of change is important in that those working with change can analyze and plan their activities to promote change. Many studies relating to the diffusion and the use of agricultural practices were considered. Based on this analysis, Lionberger identified five stages in the change process and focused on the information sources. The source is important to the process and is assessed in terms of usefulness, creating interest, informing the public, and legitimizing the information used. Other considerations related to the functions performed by individuals. The acceptance of change by farmers was studied as was the adoption and sequence of adoption patterns with the community. Studies related to the most inferential people and how these people affected others with change were reviewed. This was followed by a discussion of individual communications within the community and the shared relationship between adoption and communication patterns. An important focus has also been the studies related to the role of change agents as they are related to both community and individual adoption processes. Role studies have often focused on what the change agents are expected to do and what significant others think they should do. Finally, characteristics of innovation were identified which have an affect on acceptance rates. Among the factors identified were complexity, utility, cost, rate of cost recovery, communicability, and relative advantages of the proposed change. Although

rather succinct, these reviews of research provided a significant base for further analysis of change and change in the educational setting.

Wiles prepared a paper contrasting strategies in change in education. In the paper, he identified nine pragmatic approaches to change as it related to education (Wiles, 1965:4-5):

1. Change in the curriculum of an entire system, state or city, can be effected by adopting a new master plan drawn up by outside experts.
2. Change in the curriculum can be effected by writing new courses of study or curriculum bulletins.
3. Change in the curriculum is effected most efficiently at the local school building level.
4. Change in the curriculum occurs as people change through their participation in decision making related to the curriculum.
5. Change in the curriculum is produced through in-service education which develops new teacher perceptions and skills.
6. Change in the curriculum is effected by in-service education of the principal which produces a change in his work style.
7. Change in the curriculum is effected by supplying teachers with consultants who assist them with innovation.
8. Change in the curriculum is effected by supplying teachers with new materials of instruction.
9. Change in the curriculum is effected by providing workshop opportunities for key teachers in a building who then become resource persons and leaders for other teachers on the staff.

Wiles then proceeded with a brief discussion of eleven assumptions related to directed change in the educational setting. The eleven assumptions were (Wiles, 1965:7-8):

1. Some group must identify desired goals and plan for innovations to promote them.
2. Basic research, program design, and field testing should be done by outside forces.
3. Major instructional changes should be introduced by the professional leadership.

4. Changes can be made despite original apathy on the part of teachers.
5. The informal communications system determines whether formal presentations will be needed.
6. The identity of the one suggesting change is a major variable in acceptance of the change.
7. The key to successful innovation is providing assistance to teachers as they begin to implement the new program.
8. The most persuasive experience to encourage the adoption of a new program is to visit a successful new program.
9. A continuous program of in-service education in the skills necessary to implement the change must be available to new teachers.
10. Changes in social systems are much more difficult than changes in individuals or groups.
11. The process of curriculum change contains three steps--innovation, diffusion, and integration.

In the two listings, Wiles has succinctly organized many considerations for change. These are particularly applicable to the educator who will be assuming the role of change agent in the educational setting.

Finally, because the concept of diffusion of information is important as a basis for examining change and the role of the change agent, the term should be noted. Lionberger (1965:29) stated, "Diffusion of innovation will be regarded as acceptance over time of some specific item, idea, or practice by individuals, groups, or other adopting units linked to specific channels of communication to a social structure and to a given system of values or culture."

The remainder of the paper will focus on the change process including proposed steps derived from theory related to promoting change. This will be followed by an examination of the professional educator functioning in the role of the change agent.

The Change Process

The process of change has been analyzed by several theorists. An analysis of their positions reveals commonalities in terms of the basic sequence of events related to establishing a change. Wall (1972) analyzed the work of eight individuals and developed a chart showing the relationships of their hypotheses. Reviews by Lippitt, Watson, and Westley (1958) and Lionberger (1960) have been selected for inclusion in this paper along with those of Rogers (1962), Hull (1975), Mangione (1970), and Doak (1970) because of the relationship to our consideration of change in agricultural education. Some difference of interpretation or emphasis of the phases involved in identifying and moving to change merits the consideration of the ideas of several persons.

Lippitt, Watson, and Westley (1958) analyzed numerous studies and formulated a set of principles and techniques for directing planned change. Their analysis was organized on the basis of the type of client system involved. The four systems considered were individuals, small groups, large organizations, and communities. Educators are concerned with change in all of these systems, but those working in curriculum and supervision will find the analysis of change in organizations and small groups the most helpful. Seven phases of change were identified and discussed which are applicable for the four types of client systems. The steps or phases were identified as (Lippitt, et al., 1958:123):

1. The client system discovers the need for help, sometimes with stimulation by the change agent.
2. The helping relationship is established and defined.
3. The change problem is identified and clarified.
4. Alternative possibilities for change are examined; change goals or intentions are established.
5. Change efforts in the "reality situation" are attempted.
6. Change is generalized and stabilized.

7. The helping relationship ends or a different type of continuing relationship is defined.

Phase one involves the discovery by the client system that there is a need for help. This awareness of a problem must be translated into a desire for change. The client system must realize that there is a more desirable state of affairs and that help is available before they will desire help. The second phase is the establishment of a change relationship. During this period, lines of communication must be established, the competence of the change agent examined, and the commitment of the client system established. The foundation for the success of the undertaking is formulated during this phase. The clarification or diagnosis of the client system's problem during phase three is often a most trying time. The client system may feel threatened as the problem is broadened and analyzed. During this phase, research techniques should be employed to verify the problem at hand. The process of conceptualization must be carried into the examination of alternative routes and goals and the establishing of goals and plans of action in phase four. The system often realizes at this point that old goals must be abandoned and new patterns of behavior established. Therefore, the change agent must be aware of motivational problems which might endanger the change. Phase five is concerned with the transformation of intentions into actual change efforts. The success of the entire venture is measured by the effectiveness in which the intentions are actually transformed into achievements. Support of the total system and systems of feedback are important factors during this period of establishing action. The generalization and stabilization of the change is considered in phase six. If change is accepted by the subparts of the system or is carefully evaluated and recognized, it is more likely to become a stable characteristic of the system. If the change is not stabilized, the previous effort has been in vain as the

system will revert to its old ways. The final phase involves the achieving of a terminal relationship between the client system and the change agent. Many different methods are used. The one selected will depend on the maturity of the client system. Ideally the system will be in a position to evaluate needs for additional change, solve many of their own problems, and seek a consultant when necessary. The success of the change process will greatly influence the type of terminal relationship established.

Lionberger (1960:32) identified five stages in the adoption process as:

1. Awareness
2. Interest
3. Evaluation
4. Trial
5. Adoption

During the awareness stage mass media, friends and neighbors, agricultural agencies, and salespersons were sources which provided information about a new practice. Additional information is provided during the interest stage by these same sources. During the evaluation stage, the person tries out the ideas mentally. Again, these same sources are influential but friends and neighbors are most important during this stage. During the trial stage, the person uses or tries a few of the ideas involved in the innovation and again, support of friends and neighbors is most important. During the final adoption stage, the innovation is accepted on a full scale and a continued basis. Personal experience becomes a most important factor in this area.

Rogers (1962), in the book Diffusion of Innovations, used the five steps identified by Lionberger. The five steps were awareness, interest, evaluation, trial, and adoption. The awareness stage focuses on making known the need for change on the parts of the people and making known the innovations available.

The next need is to stimulate and/or provoke interest by providing announcements or information followed by evaluation to determine if the qualities merit the change and then to promote trial on a limited basis. If the innovation is to be established, materials and workable procedures become important to the final step of adoption.

Hull (1975) adapted the model proposed by Rogers by adding illustrations appropriate to education. During the awareness stage, there is a need to provide information about the innovation. He suggested use of brochures, bulletin board displays, and radio spots. To stimulate and provoke interest, he suggested use of administrative announcements and reports. To determine a sense of quality through evaluation, he suggested using comments and observations about progress or visits to demonstration sites. During the trial time when an innovation is used in limited ways, he suggested conducting workshops and making available technical assistance. Finally, during the adoption stage, he suggested the use of textbook guides and other means of permanently reinforcing and making possible the use of the innovation.

Mangione (1972) questioned who should decide the need for change, the direction for the change, the extent to which a change should be made, and challenged the readers to determine, if in fact, change would make for better school programs. If needed, he proposed that change would involve the following elements:

1. Involvement
2. Climate
3. Identification of Need for Change
4. Establishing Priorities
5. Searching for Solutions
6. Implementation of the Change

A basic principle suggested was that those person who are to be influenced by the change should be involved in making decisions concerning the change. Peer pressure and review could be employed to obtain positive involvement of the clientele. Climate was another factor identified as an important condition for change in the organziation. Some administrators and some peer groups are more open and acceptive and supportive of change than are others. A third element of change would focus on needs identification and the assessing of current positions. Some would use brainstorming as a technique followed by a procedure of data gathering and examination of alternative actions. Next, those involved with the change should be involved in the setting of priorities. In summary, he stressed that leaders wishing to encourage change must demonstrate the need for and value of innovative behavior.

Doak (1972:368) proposed a model for change. In doing so, he suggested that a model should be viewed as a means of synthesis of related parts and should also provide a theoretical basis for decision making. In the model, he suggested that the following factors be considered:

1. Organizational climate
2. Disequilibrium
3. Alternatives
4. Adaptation
5. Trial and evaluation
6. Adoption or rejection

The consideration of organizational climate looked at the morale of those involved in the position of leadership and how comfortable those involved were in considering and actually making change. This was a factor on the second consideration of disequilibrium. The disequilibrium stage focused on organizational goals. This was clarified as an area of problem identification in

seeking out things which should be changed. This would be followed by considering alternatives and proposing methods leading into the adaptation stage. Adaptation provides for trial and error and then for trial and evaluation and, finally, for any change which should either be adopted and internalized or formally rejected.

An analysis of the different models or discussions of the process of change would indicate the following common elements. One, an awareness of a need for change or a possible innovation for adoption or the identification of a problem which needs to be corrected. Two, a development or cultivation of interest in the change or innovation. Three, the identification of alternate approaches or possibilities for change and/or the evaluation and selection of the best alternative. Four, a trial period or an establishment of the best identified solution. Five, the adoption process which includes stabilization and the necessary support systems to make the change feasible. This process then becomes the conceptual framework from which a person decides to promote or cultivate change, and to work as a change agent.

The Change Agent

If change is to be planned and directed, rather than permitted to evolve by chance, there must be a moving force or a person directing the process. The term change agent was used in most of the writings about the process of change to identify the person working to implement the process. The role assumed, the techniques used, and related considerations in planning change provide the focus for this section of the paper.

Lionberger (1960) reviewed studies which contributed to an understanding of the function of the change agent. Studies were cited which provided a basis for assessing the influence of persons and outside social systems on adoption

practices for individuals. In addition, there were studies concerned with the change agent. The opinion leader and the identification of opinion leaders were tools suggested as being useful for the change agent.

Havelock (1973:5) defined change agent as, "A person who facilitates planned change or planned innovation." The task of the change agent was divided into four primary types of actions. The change agent can serve as a catalyst, a solution giver, a process helper, or a resource linker. As a catalyst, the agent must upset the status quo and strive to energize the problem solving process to get things started because people basically are reluctant to change. In the role of the solution giver, the change agent is working to bring about change on the part of people who have many definite ideas about what the change should be. The key to serving as the solution giver might well be knowing when and how to offer the appropriate solution. In the role as the process helper, the change agent is working in the "how to" area. The help could be in defining needs or diagnosing of problems, identifying resources, selecting solutions, or evaluating the outcomes of solutions. In effect, as process helper, the work is directed at implementing the steps identified in the previous section of this paper. As a resource linker, the change agent is working in the problem solving area. The need would be to identify and help to make available needed resources to provide for the culminating events or materials needed to stabilize the change.

Lippitt, Watson, and Westley (1958) devoted a portion of their book, Dynamics of Planned Change, to describing the importance of the change agent. The emphasis stressed helping the client system work through the processes of change, ending with a termination of the helping relationship. Important considerations for the change agent related to the professional assessment of the need for change, the type of relationship established with the group, identifying

appropriate helping procedures to follow in the various stages of the process, and in recognizing and varying the help provided for different groups. The function of the change agent varies from group to group and from stage to stage in the process. The challenge presented focused on the ability of the change agent to assume the appropriate role with the proper intensity at the needed time.

Beckerman (1972), looking at the university extension role, discussed the change agent as a professional. In the article, he suggested that this might well be a new professional role for university people. Drawing on the types of activities described by Havelock, the agent should assume the role of the training specialist. The extension educational specialist would be available to help schools to recognize the research, development, and inservice needs and to work through the process to make changes. The role suggested for the educational specialist would be similar to the role of the university extension division agricultural agent as studied by Lionberger. In the final analysis, the key to effectiveness would lie with the commitment of the professional to the work and the seriousness with which the charge of improving the quality of education was viewed.

The professional as a change agent must be concerned with not only the group and the process, but also with the perceptions which the group holds about the credibility of the agent. These factors were noted by Doll (1959:102-105) in a discussion of change based on experiences in the educational setting.

1. People improve with greatest enthusiasm when they detect a desire of the change agent to improve himself.
2. The direction of change should be determined cooperatively.
3. To promote change, we must identify and examine each other's centrally held values.
4. Change often occurs in informal settings.

5. We should seek to change ourselves and help others change through a variety of experiences.
6. We should divide our time between individual and group contacts.
7. We must act as though we realize that a person's resistance to change constitutes a major individual difference.
8. Whenever possible, change should always occur in a setting that involves problem solving.
9. We must try to create and maintain a climate of freedom for those with whom we work.
10. Channels of communication must be kept open.
11. We should remember that persons in status leadership positions have great power to satisfy needs.
12. Once launched into our orbit of change, we often need additional impulses to sustain the change.
13. The curriculum worker, as a change agent, should work on a limited number of fronts at one time.
14. A change agent's success depends substantially on his ability to maintain his prestige and acceptance.

An important consideration suggested for use by the change agent is a knowledge of opinion leaders in the client system. Three studies have looked specifically at opinion leaders in vocational education. Hensel and Johnson (1969) studied opinion leaders among teachers of vocational agriculture. The study assumed that the change agent would use the steps of the change process previously identified in this paper. Measures of opinion leadership were collected using a scale of sociometric choices, a self-designating opinion leadership scale, and a key informant rating procedure. The sociometric technique could be used to identify key informants. The study required some type of contact or survey with all teachers in the state. They found that generally the opinion leaders were a great deal like other teachers of vocational agriculture and that there were very few personal or social characteristics which

would distinguish them from other teachers. District supervisors were considered by teachers to be a good source of advice and information. In an attempt to identify those few characteristics which distinguished opinion leaders, they determined that teachers of vocational agriculture who were opinion leaders were more innovative than their peers and had taught for a longer period of time in the position in which they were currently employed. They also had a significantly higher income from teaching and had obtained a significantly higher level of education than had other teachers. Many of these findings would appear to accrue to the individual who did a good job as he matured on the job and gained more experience.

Blanton, Hull, and Russell (1971) also looked at opinion leadership and communication linkages among agricultural educators. The study was conducted as a follow up of the study conducted by Hensel and Johnson. They attempted to survey the total population and again used a sociometric questionnaire. Participants were asked to rank teachers in three instructional areas. In addition, this study examined communication linkages among teachers, supervisors, and teacher educators in South Carolina. They found that teachers of vocational agriculture named as opinion leaders were older, had more years of teaching experience, had earned more college credit, and had attended a greater number of workshops than had other teachers. Supervisors and other teachers were most often chosen as sources of information and advice. The single most important reason they would list a teacher would be the willingness to discuss the program. The second most important reason was the perceived performance of the students in the program. The teachers communicated with supervisors more than twice as often as with teacher educators in this state and much of the communications with the supervisors involved reports and contest preparation activities. The communications with teacher educators most frequently had to do with

improvement of teaching, curriculum materials, and the supervision of student teachers. Finally, most face-to-face communications between supervisors and teachers took place in district meetings.

Bice (1970) conducted an extensive review of the literature related to opinion leaders and isolated certain characteristics of opinion leaders as related to working with groups. The characteristics so identified about teachers were (Bice, 1970:4):

1. Opinion leaders are older than their peers. Opinion leaders are usually in the 35-45 year age group.
2. Opinion leaders have had more total years of teaching experience.
3. Opinion leaders among teachers have taught for a longer period of time in their present job.
4. Opinion leaders among teachers are those who have enrolled in a greater number of inservice training programs.
5. Opinion leaders among teachers participate in more social- and professional organizations and activities in their local communities.

The characteristics of the schools included (Bice, 1970:4):

1. Opinion leader teachers work in larger school systems (e.g., 1,500 to 2,000 students rather than 500 or 600 students).
2. Opinion leaders work in school systems which have a higher per pupil expenditure.
3. Opinion leaders work in school systems in which a high percentage of the teachers participate in inservice training programs.
4. Opinion leaders work in school systems in which there is a 10 to 15 percent turnover in teaching staff each year.

The types and sources of information were (Bice, 1970:5):

1. Opinion leaders use more technically accurate sources of information.
2. Opinion leaders use sources of information requiring only a small amount of personal time.

3. Opinion leaders are more cosmopolitan in nature.
4. Opinion leaders will turn to district supervisors and/or state supervisors as sources of information before they will turn to teacher educators.

The effective change agent can draw on a knowledge of the change process and incorporate into a plan of action information obtained from studies of communication patterns and the adoption process. The challenge for the change agent requires the development of the expertise to determine the support, the information, and the persons to work with at a given time in the process to maximize the effectiveness and stabilize the impact of the change.

Summary

Change as a dynamic force in our society has been examined to provide information for those professionals interested in directing the process. Professional educators in agriculture can draw on the information gleaned from studies of the change process and the challenges associated with functioning as a change agent. The challenge to the agricultural educator as a change agent is to first identify and internalize the steps involved in the process of change. And, finally, to operationalize the process in terms of establishing appropriate relationships and utilizing appropriate techniques in assisting individuals and groups to make the desirable change.

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